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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/790,148

03/02/2004

Duane William Zugel

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7590

11/15/2004

Harold L. Novick  
NATH & ASSOCIATES PLLC  
6th Floor  
1030 15th Street, N.W.  
Washington, DC 20005

EXAMINER

SMITH, RICHARD A

ART UNIT

PAPER NUMBER

2859

DATE MAILED: 11/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/790,148	ZUGEL ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	R. Alexander Smith	2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2004.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5, 6, 9, 12, 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 2,727,314 to Dossie et al.

Dossie et al. discloses the limitations when the level face is 18 and the optical transfer element is the components shown in figure 2.

3. Claims 1, 5, 6, 10, 12, 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 2,791,036 to Gericke.

With respect to said reflective surface being a mirror, see column 2, lines 39-42.

***Claim Rejections - 35 USC § 103***

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dossie et al.

Dossie et al. teaches all that is claimed as discussed in the above rejections of claims 1, 5, 6, 9, 12, 15 and 16 except for the method steps of claim 19.

With respect to the method steps of claim 19 including the step of fixing an optical transfer element and viewing said bubble in said viewing plane: The method steps will be met during the normal construction and operation of the level and the optical accessory disclosed by Dossie et al.

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6. Claims 11 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gericke.

Gericke teaches all that is claimed as discussed in the above rejections of claims 1, 5, 6, 10, 12, 15 and 16 except for the optical transfer element being detachable and the method steps of claim 19.

With respect to the optical transfer element being detachable: Gericke discloses that the optical transfer element 16 overlies the vial 30 which is cemented into groove 29 in the body. Said optical transfer element being held by a screw 39 to the body. It appears to the examiner that the optical element is easily detachable from said level. Therefore, would have been obvious to one of ordinary skill in the art at the time of the invention to detachably hold said element to said body, as suggested by the design taught by Gericke, in order to allow the user to replace the optical transfer element should it become scratched or covered by cement, plaster, paint, etc. in order to clean, polish or replace.

With respect to the method steps of claim 19 including the step of fixing an optical transfer element and viewing said bubble in said viewing plane: The method steps will be met during the normal construction and operation of the level and the optical accessory disclosed by Gericke.

7. Claims 2, 4, 7, 13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gericke in view of U.S. 2,750,677 to Wirth.

Gericke teaches all that is claimed as discussed in the above rejections of claims 1, 5, 6, 10, 12, 15 and 16 except for said optical transfer element enlarging the image, an illumination

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apparatus attached to the body for illuminating said image, and the reflective surface comprising a prism.

Wirth discloses an optical transfer element (figure 7) which enlarges the image (via lens face 7), an illumination apparatus attached to the body (via 9 directing ambient light to the vials), and the reflective surface comprises a prism (2). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the optical transfer element, taught by Gericke, by using the design including the enlarging, the illumination, and the prism, as taught by Wirth, in order to provide illumination in low lighting and to enlarge the image for improved viewing.

8. Claims 3, 11, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gericke in view of U.S. 4,103,430 to Schrader.

Gericke teaches all that is claimed as discussed in the above rejections of claims 1, 5, 6, 10, 12, 15 and 16 except for said optical transfer element diminishes a size of said image, and said optical transfer element is detachable from said spirit level.

Schrader discloses an attachable optical transfer element having a concave mirror that reduces the image size (column 4, lines 6-10) to allow a wider range of off-axis viewing and to clearly focus the bubble image in the range of vision of the viewer. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the level taught by Gericke, to include an optical transfer element that is detachable and/or has a concave

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image, as suggested by Schrader, in order to allow off axis viewing and to clearly focus the bubble image in the range of vision of the viewer.

9. Claims 4, 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gericke in view of U.S. 5,020,232 to Whiteford.

Gericke teaches all that is claimed as discussed in the above rejections of claims 1, 5, 6, 10, 12, 15 and 16 except for an illumination apparatus attached to the body for illuminating said image and said optical transfer element comprising an electric viewing device.

Whiteford discloses a level wherein each bubble vial includes an LED in order to selectively illuminate the vials when the level is used in poorly light locations. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the level or the attached optical transfer element, taught by Gericke, to include an illumination apparatus attached to the body, as taught by Whiteford, or the transfer element, as suggested by Whiteford, in order to light the vials when the level is used in poorly light spaces.

With respect to said optical transfer element comprising an electric viewing device: In a broad sense, this limitation is met since an illumination device is an electric viewing device that allows one to see or view the image of the bubble vial.

10. Claims 1, 5, 6, 10, 11, 12, 15, 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 3,180,036 to Meeks, Sr. in view of U.S. 2,791,036 to Gericke.

Meeks discloses a spirit level (figures 10 and 11) comprising a body having a level face for setting a surface; at least one bubble vial mounted in said body, said bubble vial having a longitudinal axis generally perpendicular to said level face; and an optical transfer element (28 and 29) fixed to said body (via 30) which transfers an image of said bubble vial to a viewing plane so that a user can check the plumb of a corner bead in two vertical directions at one time (column 3, lines 26-38), said element being a reflective surface and a mirror.

Meeks does not teach the viewing plane being parallel to said level face and the method steps of claim 19.

Gericke teaches that a reflective surface can be aligned with a vial perpendicular to the level face to show plumb in two different directions wherein the viewing plane is parallel to said level face. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to enhance the level, taught by Meeks, by adding the ability to attach the optical element to view the perpendicular vial, as taught by Gericke, in order to give the user the option as to how to view plumb in two directions, including while standing directly in front of said level, as taught by Gericke.

With respect to the method steps of claim 19 including the step of fixing an optical transfer element and viewing said bubble in said viewing plane: The method steps will be met during the normal construction and operation of the level and the optical accessory disclosed by Meeks, Sr. as modified by Gericke.



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11. Claims 3 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meeks and Gericke as applied to claims 1, 5, 6, 10, 11, 12 15, 16 and 19 above, and further in view of U.S. 4,103,430 to Schrader.

Meeks and Gericke teach all that is claimed as discussed in the above rejections of claims 1, 5, 6, 10, 12, 15, 16 and 19 except for said optical transfer element diminishes a size of said image.

Schrader discloses an attachable optical transfer element having a concave mirror that reduces the image size (column 4, lines 6-10) to allow a wider range of off-axis viewing and to clearly focus the bubble image in the range of vision of the viewer. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the level taught by Gericke, to include an optical transfer element that has a concave image which diminishes the size of the image, as suggested by Schrader, in order to allow better off axis viewing and to clearly focus the bubble image in the range of vision of the viewer.

12. Claims 1, 8, 9, 12 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 4,720,920 to Tudek in view of DE 3,205,206 to Hoelzl.

Tudek discloses a spirit level comprising a body having a level face for setting a surface; at least one bubble vial mounted in said body, said bubble vial (9) having a longitudinal axis generally perpendicular to said level face; and an optical transfer element (18) fixed to said body which transfers an image (in the form of a light) of said bubble vial to a viewing plane, said

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optical transfer element comprises an electric viewing device, and said optical transfer element is internally mounted in said spirit level.

Tudek does not disclose said viewing plane being generally parallel to said level face.

Hoelzl discloses a spirit level employing a bubble vial wherein the electronic information or images in the form of lights (53, 54, 55 and/or 56) or a readout screen (62) is mounted to transfer said image to a viewing plane generally parallel to said level face. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the level and transfer element, taught by Tudek, to include an image to a plane parallel to the level face, as taught by Hoelzl, in order to increase the versatility and viewing for the user.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. The prior art cited in PTO-892 and not mentioned above disclose related transfer elements and levels.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. Alexander Smith whose telephone number is 571-272-2251. The examiner can normally be reached on Monday through Friday from 9:30-6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F. Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'R. Alexander Smith', with a long horizontal flourish extending to the right.

R. Alexander Smith  
Patent Examiner  
Technology Center 2800

RAS  
November 15, 2004